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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/725,714
Filing Date: December 02, 2003
Appellant(s): HUNDSCHEIDT ET AL.

Hundscheidt et al.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 03/25/2009 appealing from the Office action mailed 08/18/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2003/0185397	Ishiguro	03-2002
2004/0032950	Graunke	08-2002
2005/0005272	Moody et al.	12-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims **1- 4, 8-9, 11-14, and 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ishiguro (Publication no.: US 2003/0185397 A1)** in view of **Graunke (PGPUB: US 2004/0032950 A1).**

With respect to **claims 1,** Ishiguro teaches a method and a system for determining locations of service instances for optimising distribution of a service in a network (Ishiguro: page 9, paragraph 155, network), the service instance providing the service from a source to a plurality of clients each having predetermined requirements,

wherein said Wide Area Network (WAN) can be modelled by means of a graph, said method comprising steps of:

placing (Ishiguro: page 7, paragraph 143, noted that each node on the tree is assigned with a licensing key in servicing for the encryption and decryption) a service instance in each leaf in said graph (Ishiguro: fig. 12, and page 7, paragraph 142, noted the hierarchical tree structure is made up with the leaves); said each leaf representing a node in the network directly connected to the plurality of clients (Ishiguro: page 7, paragraph 143, and page 8 paragraph 146, noted that each leaf represents a node, which constitutes the tree structure); and starting from the leaves, for each of the service instances (Ishiguro: page 8, paragraph 145, noted that the key granting the use of any service starts from the leaf at the bottom level to the root node at the topmost level):

checking (Ishiguro: page 7, paragraph 129, noted that the client needs to provide leaf ID and password to the server in order to check whether the client has paid for the servicing fee) whether the service instance when placed in a vertex (Ishiguro: page 7, paragraph 143, noted that this checking is done in the node with the key provided) on the next higher level can fulfil the requirements (Ishiguro: page 8, paragraph 148, noted that after successively decrypting the node keys, the process is carried to next higher level node) of all clients to be served by said service instance; and

depending on the result of the checking step, moving said service instance one level higher (Ishiguro: page 8, paragraph 148 and page 13 paragraph 223, noted that after successively decrypting the node keys, the process is moved to next higher level

node) to minimize a number of service instances necessary to provide the service to the clients.

However, Ishiguro does not explicitly teach a method of managing digital copyrights of content over a Wide Area Network (WAN).

In the same field of endeavor, Graunke teaches a method of managing digital content copyrights over a Wide Area Network (WAN) (Graunke; fig. 1, page 2, paragraph 19, noted that the encrypted content distribution can be effected through WAN).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of managing digital copyrights of content over a Wide Area Network (WAN) as taught by Graunke in Ishiguro's invention in order to provide a broader range of distribution area for the authorized user (Graunke: page 2, paragraph 19).

With respect to **claim 2,** Ishiguro teaches a method according to claim 1, further comprises the steps of determining that at least two service instances (Ishiguro: fig. 12, leaves 0, 1, 2 and 3) meet in said vertex (page 9, paragraph 155, noted that these leaves share the same vertex node K00) and combining said service instances into one service instance (Ishiguro: page 9, paragraph 155, noted that this shared node key is established as a content key in servicing for data encryption and decryption).

With respect to **claim 3,** Ishiguro teaches a method according to claim 1 further comprises a step, prior to said placing step, of determining levels in said graph (Ishiguro: page 10, paragraph 170, noted that the data has a tag part which indicates

the positions of the encrypted node keys and leaf keys).

With respect to **claim 4,** Ishiguro teaches a method according to claim 1, wherein said checking step comprises a table-based analysis step (Ishiguro: fig. 15A, and page 9, paragraphs 157 and 159, noted that a table-based analysis is performed for the encryption keys).

With respect to **claim 8,** Ishiguro teaches a device for determining locations of service instances for optimising distribution of a service in a Wide Area Network (Ishiguro: page 9, paragraph 155, network), the service instances each providing the service from a source to a plurality of clients each client having predetermined requirements, wherein said Wide Area Network can be modelled by means of a graph, the device comprising:

lodging means (Ishiguro: page 7, paragraph 143, noted that each node on the tree is assigned with a licensing key in servicing for the encryption and decryption), for hosting a service instance;

checking means, for checking (Ishiguro: page 7, paragraph 129, noted that the client needs to provide leaf ID and password to the server in order to check whether the client has paid for the servicing fee) whether the service instance when placed in a vertex on the next higher level of the network can fulfill the requirements (Ishiguro: page 8, paragraph 148, noted that after successively decrypting the node keys, the process is carried to next higher level node) of all clients to be served by said service instance;

processing means (Ishiguro: fig. 2 CPU 21), for coordinating said lodging means and said checking means and for controlling said vertex (Ishiguro: page 4, paragraph 79

and 87, noted that CPU carries out various of processes. Including the communication responses between the clients and the servers); and

means for moving the service instance (Ishiguro: page 8, paragraph 148 and page 13 paragraph 223, noted that after successively decrypting the node keys, the process is moved to next higher level node) to minimize a number of service instances necessary to provide the service to the client; and

input/output means (Ishiguro: fig. 2, I/O interface 32), for sending and receiving messages and service instances (Ishiguro: page 4, paragraphs 83, 84 and 87, noted that I/O interface handles the response from the user and transmits the encrypted content data to the storage).

However, Ishiguro does not explicitly teach a method of managing digital copyrights of content over a Wide Area Network (WAN).

In the same field of endeavor, Graunke teaches a method of managing digital content copyrights over a Wide Area Network (WAN) (Graunke; fig. 1, page 2, paragraph 19, noted that the encrypted content distribution can be effected through WAN).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of managing digital copyrights of content over a Wide Area Network (WAN) as taught by Graunke in Ishiguro's invention in order to provide a broader range of distribution area for the authorized user (Graunke: page 2, paragraph 19).

With respect to **claim 9,** Ishiguro teaches a device according to claim 8, further comprises combining means, for determining that at least two service instances (Ishiguro: fig. 12, leaves 0, 1, 2 and 3) meet in said vertex (Ishiguro: page 9, paragraph 155, noted that these leaves share the same node K00) and for combining said service instances into one service instance (Ishiguro: page 9, paragraph 155, noted that this shared node key is established as a content key in servicing for data encryption and decryption).

With respect to **claim 11,** Ishiguro teaches a system for determining locations of service instances for optimizing distribution of a service in a network (Ishiguro: page 9, paragraph 155, network), the service instances each providing the service from a source to a plurality of clients each client having predetermined requirements, wherein said network can be modelled by means of a graph, the system comprising:

means for placing a service instance in each leaf in said graph (Ishiguro: page 7, paragraph 143, noted that each node on the tree is assigned with a licensing key in servicing for the encryption and decryption), said each leaf representing a node directly connected to the plurality of clients (Ishiguro: page 7, paragraph 143, and page 8 paragraph 146, noted that each leaf represents a node, which constitutes the tree structure);

means for starting with said each leaf (Ishiguro: page 8, paragraph 145, noted that the key granting the use of any service starts from the leaf at the bottom level to the root node at the topmost level) and determining whether said service instance, when place in a vertex on the next higher level, can fulfill the requirements of all clients to be

served by said service instance (Ishiguro: page 8, paragraph 148, noted that after successively decrypting the node keys, the process is carried to next higher level node);

in response to an affirmative determination, means for moving said service instance one level higher (Ishiguro: page 8, paragraph 148 and page 13 paragraph 223, noted that after successively decrypting the node keys, the process is moved to next higher level node) to minimize a number of service instances necessary to provide the service to the clients.

depending on the result of the checking step (Ishiguro: page 8, paragraph 148 and page 13 paragraph 223, noted that after successively decrypting the node keys, the process is moved to next higher level node), moving said service instance one level higher to minimize a number of service instances necessary to provide the service to the clients.

However, Ishiguro does not explicitly teach a method of managing digital copyrights of content over a Wide Area Network (WAN).

In the same field of endeavor, Graunke teaches a method of managing digital content copyrights over a Wide Area Network (WAN) (Graunke; fig. 1, page 2, paragraph 19, noted that the encrypted content distribution can be effected through WAN).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of managing digital copyrights of content over a Wide Area Network (WAN) as taught by Graunke in Ishiguro's invention

in order to provide a broader range of distribution area for the authorized user (Graunke: page 2, paragraph 19).

With respect to **claim 12,** the limitations of this claim are substantially the same as those in claim 2. Therefore the same rationale for rejecting claim 2 is used to reject claim 12. By this rationale **claim 12** is rejected.

With respect to **claim 13,** the limitations of this claim are substantially the same as those in claim 3. Therefore the same rationale for rejecting claim 3 is used to reject claim 13. By this rationale **claim 13** is rejected.

With respect to **claim 14,** the limitations of this claim are substantially the same as those in claim 4. Therefore the same rationale for rejecting claim 4 is used to reject claim 14. By this rationale **claim 14** is rejected.

With respect to **claim 16,** Ishiguro teaches all of the claimed limitations, except that he does not explicitly teach a method of managing digital copyrights of content over a telecommunications network.

In the same field of endeavor, Graunke teaches a method of managing digital content copyrights over a telecommunications network (Graunke; fig. 1, page 2, paragraphs 19 and 23). The same motivation used in claim 1 applies to equally as well to claim 16.

With respect to **claims 17** and **18,** the limitations of these claims are substantially the same as those in claim 16. Therefore the same rationale for rejecting claim16 is used to reject claims 17 and 18. By this rationale **claims 17 and 18** are rejected.

4. Claims **5 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ishiguro (Publication no.: US 2003/0185397 A1)** in view of **Graunke (PGPUB: US 2004/0032950 A1)** and further in view of **Moody (publication no.: US 2005/0005272).**

With respect to **claims 5 and 15,** the combined method of Ishiguro and Graunke teaches all the claimed limitations except that they do not explicitly teach a method of utilizing a Petri net analysis for a checking step.

In an analogous art, Moody teaches a method of utilizing a Petri net analysis for a checking step (Moody: page 3, paragraphs 47 and 48, noted that Petri nets technique is used in analyzing the system).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the analysis technique of Petri nets as taught by Moody in the combined method of Ishiguro's and Graunke's method in order to provide a powerful and efficient system model that incorporate the synchronization, conflict, and concurrency issues associated with the distributed, dynamic resource allocation problem of autonomous negotiating systems (Moody: page 3, paragraph 48).

(10) Response to Arguments

Appellant argues claims 1-4, 8-9, and 11-14 and 16-18

5. On page 6 paragraph 3 of Appellant's Appeal Brief, Appellant argues that "A service instance is an entity such as a proxy server in the Internet or in a telecom network that can provide a service to a client. Clients of a service may be, for example, access networks or access nodes or user terminals. In order to optimize service

distribution throughout the WAN, service instances are allocated to leaves in the tree graph. Some service instances may be combined in one leaf and the goal is to determine the minimum number of service instances that can reliably serve clients in the WAN (Abstract)." This argument is not deemed persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *A service instance is an entity such as a proxy server in the Internet or in a telecom network that can provide a service to a client.* and *Some service instances may be combined in one leaf and the goal is to determine the minimum number of service instances that can reliably serve clients in the WAN*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In addition, the presently recited claims require that "placing a service instance in EACH leaf in said graph, said each leaf representing a node in the WAN directly connected to the plurality of clients", in which the examiner has mapped to the *assigning of a licensing key in servicing for the encryption and decryption of the digital content on each leaf/node of the network* (Ishiguro: fig. 12 page 7, paragraphs 142-143). It is unclear and contradictory to the examiner how to minimize the number of service instances to the leaf/node of the network while still placing a service instance in each leaf of the graph. Accordingly, the examiner submits that Ishiguro reference still reads on the above limitations.

6. On page 6 paragraph 5 of Appellant's Appeal Brief, Appellant argues that "The Examiner appears to equate a key (Ishiguro) with a service instance in the Applicant's invention. This is incorrect. The key in Ishiguro contains a license and device ID. The service instance is a copy of an application or service that can supply a service to a client." And further on last paragraph of page 7, Appellant further argues that "Keys are not service instances and a person skilled in the art would not consider the keys disclosed in the Ishiguro reference as such." These arguments are not deemed persuasive.

In response to Appellant's argument, the examiner respectfully disagrees. In reviewing Appellant's arguments it appears that Appellant has a specific meaning of "service instances", which has not been positively recited in the claims are presented. Therefore, the claims are interpreted by the examiner as broadly reasonable as possible in light of the specification. In the instant case, the plain ordinary meaning for the phrase "service instances" is simply a type of service that serves each leaf/node of a network, in which the examiner has reasonably interpreted it as a *licensing key* in serving for the encryption and decryption for the digital content for each node in the network (Ishiguro: page 7, paragraphs 142-143). Therefore, presently claimed invention is not patentable over Ishiguro in view of Graunke.

Appellant argues claims 5 and 15

7. Appellant's arguments toward these claims are substantially the same as those directed toward claims 1 and 8, which the examiner has responded above. Appellant does not provide any other arguments that distinguish over the references of Ishiguro and Graunke, therefore the present rejection should be affirmed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Lin Liu/

Examiner, Art Unit 2445

Conferees:

/Kenny S Lin/

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